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NEWS 17 AUG 27 BIOTECHABS/BIOTECHDS: Two new display fields added for legal status data from INPADOC
NEWS 18 SEP 01 INPADOC: New family current-awareness alert (SDI) available
NEWS 19 SEP 01 New pricing for the Save Answers for SciFinder Wizard within STN Express with Discover!
NEWS 20 SEP 01 New display format, HITSTR, available in WPIDS/WPINDEX/WPIX
NEWS 21 SEP 14 STN Patent Forum to be held October 13, 2004, in Iselin, NJ

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TI Heregulin **regulates** the ability of the ErbB3-binding protein Ebp1 to bind E2F promoter elements and repress E2F-mediated transcription.
 L8 ANSWER 4 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
 TI The orf13 T-DNA gene of Agrobacterium rhizogenes confers meristematic competence to differentiated cells
 L8 ANSWER 5 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
 TI CDK activity antagonizes Whi5, an inhibitor of G1/S transcription in yeast.
 L8 ANSWER 6 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
 TI RB from a bud's eye view.
 L8 ANSWER 7 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
 TI Differential stage-specific **regulation** of cyclin-dependent kinases during cambial dormancy in hybrid aspen.
 L8 ANSWER 8 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
 TI Differentiation-inducing factor-1-induced **growth** arrest of K562 leukemia cells involves the reduction of ERK1/2 activity.
 L8 ANSWER 9 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Human mutant p53 (Δ 126-132) identified in c-Jun over-expressing MCF-7 cell and their therapeutic uses
 L8 ANSWER 10 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Smac-peptides as therapeutics against cancer and autoimmune diseases by sensitizing for TRAIL- or anticancer drug-induced apoptosis

=> d pi

L8	ANSWER 1 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI		WO 2004016775	A2	20040226	WO 2003-EP9142	20030813
		WO 2004016775	A3	20040506		
		W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ; MD, RU			
		RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

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L8 ANSWER 3 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
TI Heregulin **regulates** the ability of the ErbB3-binding protein Ebp1 to bind E2F promoter elements and repress E2F-mediated transcription.

=> d 3 ab

L8 ANSWER 3 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AB The ErbB3/4 ligand heregulin (HRG) profoundly affects **cell growth** and differentiation, but its mechanism of action is poorly understood. Ebp1, a protein isolated by its binding to ErbB3, inhibits **cell growth** and represses transcription of **E2F-regulated cell cycle** genes. Since Ebp1 shares 38% identity with a Schizosaccharomyces pombe DNA-binding protein, we postulated that Ebp1 could bind E2F consensus elements in an HRG-inducible manner, leading to transcriptional repression. We show here that GST-Ebp1 bound to the DNA sequence bound by the *S. pombe* protein. Whereas GST-Ebp1 alone failed to bind E2F1 promoter elements, Ebp1 contained in nuclear lysates associated with E2F1 consensus sequences in the E2F1 promoter. Endogenous Ebp1 was recruited to the E2F1 promoter *in vivo* as demonstrated by chromatin immunoprecipitation assays. Ebp1 bound E2F consensus oligonucleotides in association with E2F1, **retinoblastoma** protein, and HDAC2. HRG **regulated** the association of Ebp1 with E2F promoter sequences and enhanced the ability of Ebp1 to repress transcription. Our findings suggest that Ebp1, by linking HRG activation of membrane receptors to E2F gene activity, may be a downstream modulator of the effects of HRG on **cell cycle** progression.

=> d 6 ab

L8 ANSWER 6 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AB RB and related proteins block transcriptional activation of genes critical to initiation of the **cell cycle** and suppress unwanted **cell division**. The circuitry controlling this response is generally conserved from humans to yeast, but no negative **regulator** like RB has been found in yeast. In this issue of Cell, two studies (Costanzo et al., 2004; de Bruin et al., 2004) reveal that Whi5 appears to play the role of RB in preventing precocious **cell cycle** entry in budding yeast.

=> d 11-20 ti

L8 ANSWER 11 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
TI Expression profile and cellular localization of maize Rpd3-type histone deacetylases during **plant** development

L8 ANSWER 12 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
TI Suppression of human prostate cancer cell **growth** by beta-lapachone via **down-regulation** of pRB phosphorylation and induction of Cdk inhibitor p21WAF1/CIP1.

L8 ANSWER 13 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on

STN

TI Induction of **cell cycle regulatory** proteins
by murine B cell proliferating pectic polysaccharide from the roots of
Bupleurum falcatum L.

L8 ANSWER 14 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN

TI *Arabidopsis E2Fc* functions in cell **division** and is degraded by
the ubiquitin-SCFAtSKP2 pathway in response to light

L8 ANSWER 15 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN

TI Phosphorylation of **retinoblastoma**-related protein by the cyclin
D/cyclin-dependent kinase complex is activated at the **G1/S**
S-phase transition in tobacco

L8 ANSWER 16 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN

TI Control of the **G1/S** phase transition in **plants**

L8 ANSWER 17 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN

TI **G1 to S** transition: more than a **cell**
cycle engine switch

L8 ANSWER 18 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN

TI **Cell cycle** control in **plants**

L8 ANSWER 19 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN

TI Insights into the **G1/S** transition in **plants**.

L8 ANSWER 20 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN

TI Inhibition of **cell cycle** progression in human leukemia
HL-60 cells by esculetin.

=> d 15 ab

L8 ANSWER 15 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN

AB In mammals, D-type cyclin-associated kinases mainly **regulate** the
G1/S transition by phosphorylating the
retinoblastoma (Rb) protein. We previously demonstrated that in
tobacco, cyclin D (Nicta; CycD3;3) is complexed with the PSTAIRE-containing
cyclin-dependent kinase (CDKA) from tobacco. Here, we show that Nicta;
CycD3;3-associated kinases phosphorylate both the tobacco Rb-related protein
(NtRb1) and histone H1. Although NtRb1 kinase activity was detected only
during the middle **G1**- to early **S**-phase, histone H1
kinase activity was observed as two peaks in **G1**- to **S**
-phase and **G2/M**- to **M**-phase. Importantly, we show that the proportion of
cells in the **G1**-phase was reduced in transgenic Bright Yellow-2
cells overexpressing Nicta; CycD3;3-GFP. Mutational analyses revealed
that phosphorylation of Thr-191 in Nicta; CycD3;3 possibly is required for
both full kinase activity and localization predominantly to the nucleus.
These data suggest that Nicta; CycD3;3 acts as a rate-limiting
regulator in the **G1/S** transition by forming
active complexes with CDKA or its related kinases to phosphorylate
Rb-related protein and potentially plays a novel role during **G2/M** and
mitosis.

=> d 16 ab

L8 ANSWER 16 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN

AB A review on roles of cyclins and cyclin-dependent kinase (CDK),
retinoblastoma protein (pRb) homolog RRB as a **growth**
signaling mol., E2F transcription factor, and other **regulatory**

factors in transcriptional and post-transcriptional regulation of the G1/S phase transition in plants.

=> d 16 so

L8 ANSWER 16 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN
SO Tanpakushitsu Kakusan Koso (2002), 47(12, Zokango), 1639-1644
CODEN: TAKKAJ; ISSN: 0039-9450

=> d 17 ab

L8 ANSWER 17 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN
AB A review. CDK-cyclin complexes are the universal drivers of cell cycle transitions. Progression through G1 and transition to S-phase, thereby initiating genome duplication, requires the concerted action of cyclin-dependent kinase (CDK)-cyclin complexes on specific targets. These targets belong to at least two major regulatory networks: the **retinoblastoma**-related (RBR)/E2F pathway and complexes that are responsible for the initiation of DNA replication. The G1 phase is central to the integration of signals that regulate both the exit from the cell division cycle to differentiation and the reactivation of cell proliferation. Cellular factors that are involved in these pathways play a role in regulating cell size and number, and organogenesis. As a consequence, they are also involved in determining plant architecture. Learning about the mechanisms of cell cycle components and their regulatory networks helps the authors to understand how cell proliferation, growth and development are integrated.

=> d 17 so

L8 ANSWER 17 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN
SO Current Opinion in Plant Biology (2002), 5(6), 480-486
CODEN: COPBFZ; ISSN: 1369-5266

=> d 28 ab

L8 ANSWER 28 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
AB The **retinoblastoma** protein (Rb) regulates both the cell cycle and tissue-specific transcription, by modulating the activity of factors that associate with its A-B and C pockets. In skeletal muscle, Rb has been reported to regulate irreversible cell cycle exit and muscle-specific transcription. To identify factors interacting with Rb in muscle cells, we utilized the yeast two-hybrid system, using the A-B and C pockets of Rb as bait. A novel protein we have designated E1A-like inhibitor of differentiation 1 (EID-1), was the predominant Rb-binding clone isolated. It is preferentially expressed in adult cardiac and skeletal muscle and encodes a 187-amino-acid protein, with a classic Rb-binding motif (LXCXE) in its C terminus. Overexpression of EID-1 in skeletal muscle inhibited tissue-specific transcription. Repression of skeletal muscle-restricted genes was mediated by a block to transactivation by MyoD independent of G1 exit and, surprisingly, was potentiated by a mutation that prevents EID-1 binding to Rb. Inhibition of MyoD may be explained by EID-1's ability to bind and inhibit p300's histone acetylase activity, an essential MyoD coactivator. Thus, EID-1 binds both Rb and p300 and is a novel repressor of MyoD function.

=> d 18 ab

L8 ANSWER 18 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN
AB A review on roles of cyclin-dependent kinases (CDKs) and cyclins D, RRBs (retinoblastoma-related proteins) which are pRb homologs, E2F, and CDK regulatory factors in plant cell cycle control at G1/S phase, focusing on difference between plants and animals. Mol. basis for control of plant organ size is also discussed.

=> d 18 so

L8 ANSWER 18 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN
SO Baiosaiensu to Indasutori (2002), 60(7), 444-449
CODEN: BIDSE6; ISSN: 0914-8981

=> d 19 ab

L8 ANSWER 19 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
AB The G1/S transition generally represents the principal point of commitment to cell division. Many of the components of the cell cycle core machinery regulating the G1/S transition in plants have been recently identified. Although plant regulators of the G1/S transition display structural and biochemical homologies with their animal counterparts, their functions in integrating environmental stimuli and the developmental program within cell cycle progression are often plant-specific. In this review, recent progress in understanding the role of plant G1/S transition regulators is presented. Emerging evidence concerning the mechanisms of G1/S control in response to factors triggering the cell cycle and the integration of these mechanisms with plant development is also discussed.

=> d 19 so

L8 ANSWER 19 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
SO Planta (Berlin), (July, 2002) Vol. 215, No. 3, pp. 345-356. print.
CODEN: PLANAB. ISSN: 0032-0935.

=> s 21-30 ti
L9 0 21-30 TI

=> del 19 y

=> d 21-30 ti

L8 ANSWER 21 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN
TI Retinoblastoma protein in plants

L8 ANSWER 22 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN
TI Expression and stability of Arabidopsis CDC6 are associated with endoreplication

L8 ANSWER 23 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN
TI Control of cell division by a retinoblastoma protein homolog in Chlamydomonas

- L8 ANSWER 24 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI **Retinoblastoma** protein: Combating algal bloom.
- L8 ANSWER 25 OF 62 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 3
- TI A **cell-cycle-regulated** kinase activity phosphorylates **plant retinoblastoma** protein and contains, in *Arabidopsis*, a CDKA/cyclin D. complex.
- L8 ANSWER 26 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4
TI The **plant cell cycle: G1/S regulation**
- L8 ANSWER 27 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI A role for nuclear phospholipase C β 1 in **cell cycle control**.
- L8 ANSWER 28 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI A novel Rb- and p300-binding protein inhibits transactivation by MyoD.
- L8 ANSWER 29 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI Mutagenesis of the pRB pocket reveals that **cell cycle arrest** functions are separable from binding to viral oncoproteins.
- L8 ANSWER 30 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 5
TI RPD3-Type Histone Deacetylases in Maize Embryos

=> d 21 ab

- L8 ANSWER 21 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN
AB A review. The **retinoblastoma** protein **regulates** the **G1/S cell cycle** transition in mammals and it is a part of the signal transduction mechanism that connects the **cell cycle** clock with cellular transcriptional machinery. Recently the **retinoblastoma** protein was detected in **plants**. It could play an important role in the cellular proliferation, **plant** development and viral infection processes. Knowledge of its functions could be a valuable contribution to the understanding of these processes in **plants**.

=> d 21 so

- L8 ANSWER 21 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN
SO Revista de la Sociedad Quimica de Mexico (2002), 46(1), 17-22
CODEN: RSQMAN; ISSN: 0583-7693

=> d 23 ab

- L8 ANSWER 23 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN
AB A key pathway that controls both **cell division** and differentiation in animal cells is mediated by the **retinoblastoma** (RB) family of tumor suppressors, which gate the passage of cells from **G1** to **S** and through **S** phase. The role(s) of the RB pathway in **plants** are not yet clearly

defined, nor has there been any evidence for its presence in unicellular organisms. Here we have identified an RB homolog encoded by the mat3 gene in Chlamydomonas reinhardtii, a unicellular green alga in the land plant lineage. Chlamydomonas cells normally grow to many times their original size during a prolonged G1 and then undergo multiple alternating rounds of S phase and mitosis to produce daughter cells of uniform size. Mat3 mutants produce small daughter cells and show defects in two size-dependent cell cycle controls: They initiate the cell cycle at a below-normal size, and they undergo extra rounds of S phase/mitosis. Unlike mammalian RB mutants, mat3 mutants do not have a shortened G1, do not enter S phase prematurely, and can exit the cell cycle and differentiate normally, indicating that the RB pathway in Chlamydomonas has a different role than in animals.

=> d 23 so

L8 ANSWER 23 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN
SO Genes & Development (2001), 15(13), 1652-1661
CODEN: GEDEEP; ISSN: 0890-9369

=> d 24 ab

L8 ANSWER 24 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
AB The discovery of a homolog of the retinoblastoma protein (Rb) in a single-celled eukaryote - the alga Chlamydomonas - promises new and surprising insights into Rb's function in cell-cycle regulation.

=> d 24 so

L8 ANSWER 24 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
SO Current Biology, (16 October, 2001) Vol. 11, No. 20, pp. R824-R827. print.
CODEN: CUBLE2. ISSN: 0960-9822.

=> d 26 ab

L8 ANSWER 26 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4
AB A review with 81 refs. G1/S controls appear central to the commitment to further cell division or differentiation in eukaryotic cells. Accumulating evidence implicates plant D-type cyclins as integrators of environmental and developmental signals within the cell cycle progression. The recent identification of plant homologs of retinoblastoma proteins (Rb) and E2F transcription factors strongly suggests that plants may deploy the E2F/Rb pathway in G1/S transition control in a similar manner as in mammalian cells. Over all, a picture of regulation is emerging: upon mitogenic signal stimulation, D-type cyclins are produced and associate with cyclin-dependent kinases (CDKs); the resulted CycD/CDK complexes phosphorylate subsequently the downstream Rb target proteins, leading to the release of free and transcriptionally active E2F factors from E2F/Rb complexes; the released E2F factors further promote transcription of genes whose products are required for G1/S transition as well as for S phase progression. Potential roles of ubiquitin-dependent proteolysis in G1/S controls are also discussed.

=> d 26 so

L8 ANSWER 26 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4
SO Euphytica (2001), 118(2), 223-232
CODEN: EUPHAA; ISSN: 0014-2336

=> d 29 ab

L8 ANSWER 29 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AB The pocket domain of pRB is required for pRB to arrest the **cell cycle**. This domain was originally defined as the region of the protein that is necessary and sufficient for pRB's interaction with adenovirus E1A and simian virus s40 large T antigen. These oncoproteins, and other pRB-binding proteins that are encoded by a variety of plant and animal viruses, use a conserved LXCXE motif to interact with pRB. Similar sequences have been identified in multiple cellular pRB-binding proteins, suggesting that the viruses have evolved to target a highly conserved binding site of pRB that is critical for its function. Here we have constructed a panel of pRB mutants in which conserved amino acids that are predicted to make close contacts with an LXCXE peptide were altered. Despite the conservation of the LXCXE binding site throughout evolution, pRB mutants that lack this site are able to induce a **cell cycle** arrest in a pRB-deficient tumor cell line. This G1 arrest is overcome by cyclin D-cdk4 complexes but is resistant to inactivation by E7. Consequently, mutants lacking the LXCXE binding site were able to induce a G1 arrest in HeLa cells despite the expression of HPV-18 E7. pRB mutants lacking the LXCXE binding site are defective in binding to adenovirus E1A and human papillomavirus type 16 E7 protein but exhibit wild-type binding to E2F or DP, and they retain the ability to interact with CtIP and HDAC1, two transcriptional corepressors that contain LXCXE-like sequences. Consistent with these observations, the pRB mutants are able to actively repress transcription. These observations suggest that viral oncoproteins depend on the LXCXE-binding site of pRB for interaction to a far greater extent than cellular proteins that are critical for **cell cycle** arrest or transcriptional repression. Mutation of this binding site allows pRB to function as a **cell cycle regulator** while being resistant to inactivation by viral oncoproteins.

=> d 29 so

L8 ANSWER 29 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
SO Molecular and Cellular Biology, (May, 2000) Vol. 20, No. 10, pp.
3715-3727. print.
CODEN: MCEBD4. ISSN: 0270-7306.

=> d 31-40 ti

L8 ANSWER 31 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
TI Induction of **G1 cell cycle** arrest and p27kip1 increase by panaxydol isolated from Panax ginseng.

L8 ANSWER 32 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 6
TI DNA replication and **cell cycle** in **plants**: learning from geminiviruses

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(2004) on STN DUPLICATE 7
- TI Geminiviruses and the **plant cell cycle**.
- L8 ANSWER 34 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 8
TI Apigenin inhibits endothelial-cell proliferation in G2/M phase whereas it stimulates smooth-muscle cells by inhibiting p21 and p27 expression
- L8 ANSWER 35 OF 62 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 9
- TI The role and **regulation** of D-type cyclins in the **plant cell cycle**.
- L8 ANSWER 36 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI A genomic approach to investigating bud dormancy and developmental **regulation** in underground adventitious buds.
- L8 ANSWER 37 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 10
TI **Cell cycle** function of a *Medicago sativa* A2-type cyclin interacting with a PSTAIRE-type cyclin-dependent kinase and a **retinoblastoma** protein
- L8 ANSWER 38 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI Transforming **growth factor beta** targeted inactivation of cyclin E:cyclin-dependent kinase 2 (Cdk2) complexes by inhibition of Cdk2 activating kinase activity.
- L8 ANSWER 39 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 11
TI The cloning of **plant E2F**, a **retinoblastoma**-binding protein, reveals unique and conserved features with animal **G1/S regulators**
- L8 ANSWER 40 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI Indole-3-carbinol and tamoxifen cooperate to arrest the **cell cycle** of MCF-7 human breast cancer cells.
- => d 32 so
- L8 ANSWER 32 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 6
SO EMBO Journal (2000), 19(5), 792-799
CODEN: EMJODG; ISSN: 0261-4189
- => d 32 ab
- L8 ANSWER 32 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 6
AB A review with >100 refs. **Plant cell growth** and development depend on continuous cell proliferation which is restricted to small regions of the **plant** called meristems. Infection by geminiviruses, small DNA viruses whose replicative cycle relies on host cell factors, is excluded from those proliferating areas. Since most of the replicative factors are present, almost exclusively, in proliferating cells, geminivirus infection is believed to induce a cellular state permissive for viral DNA replication, e.g. S-phase or, at least, some specific S-phase functions. The mol. basis for this effect seems to be the interference that certain geminivirus proteins exert on

the **retinoblastoma**-related (RBR) pathway, which analogously to that of animal cells, regulates plant cell cycle activation and G1-S transition. In some cases, geminiviruses induce cell proliferation and abnormal growth. Mechanisms other than sequestering plant RBR probably contribute to the multiple effects of geminivirus proteins on cellular gene expression, cell growth control and cellular DNA replication. Current efforts to understand the coupling of geminivirus DNA replication to cell cycle and growth control as well as the directions in which future research is aiming are reviewed.

=> d 33 so

L8 ANSWER 33 OF 62 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 7
SO Plant molecular biology, Aug 2000. Vol. 43, No. 5/6. p. 763-772
Publisher: Dordrecht : Kluwer Academic Publishers.
CODEN: PMBIDB; ISSN: 0167-4412

=> d 33 ab

L8 ANSWER 33 OF 62 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 7
AB Geminiviruses are plant DNA viruses with a small genome that infect a large variety of plant species. Viral proteins regulate viral DNA replication and transcription. Also they appear to have an impact on cellular gene expression. Cellular proteins directly involved in DNA replication, such as PCNA, have long been known to accumulate in cells expressing Rep tomato golden mosaic geminivirus. This effect can be a direct effect of the viral protein and/or be mediated by interference with the G1/S transition control, namely the pathway controlled by the **retinoblastoma**-related (RBR) protein, analogous to the human **retinoblastoma** (RB) tumour suppressor protein. Different geminiviruses seem to have evolved two mechanisms to interact with plant RBR proteins. One is dependent on a LxCxE amino acid motif present in proteins, such as RepA, encoded by members of the Mastrevirus genus, and another seems to be mediated by the viral Rep protein, which lacks the LxCxE motif, encoded by members of the Begomovirus, and perhaps the Curtovirus genus. These and other aspects of the relationships between geminivirus replication and cell cycle control pathways will be discussed.

=> d 41-50 ti

L8 ANSWER 41 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI Anti-proliferating effects of ginsenoside Rh2 on MCF-7 human breast cancer cells.

L8 ANSWER 42 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN
TI Plant D-type (CycD) cyclins and the regulation of the plant cell cycle

L8 ANSWER 43 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 12
TI Bean Yellow Dwarf Virus RepA, but Not Rep, Binds to Maize Retinoblastoma Protein, and the Virus Tolerates Mutations in the

Consensus Binding Motif

- L8 ANSWER 44 OF 62 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 13
- TI Tobacco **retinoblastoma**-related protein phosphorylated by a distinct cyclin-dependent kinase complex with Cdc2/cyclin D in vitro.
- L8 ANSWER 45 OF 62 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 14
- TI The maize **retinoblastoma** protein homologue ZmRb-1 is **regulated** during leaf development and displays conserved interactions with **G1/S regulators** and **plant** cyclin D (CycD) proteins.
- L8 ANSWER 46 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN
TI Promoter activation and following induction of the p21/WAF1 gene by flavone is involved in **G1** phase arrest in A549 lung adenocarcinoma cells
- L8 ANSWER 47 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 15
TI RRB1 and RRB2 encode maize **retinoblastoma**-related proteins that interact with a **plant** D-type cyclin and geminivirus replication protein
- L8 ANSWER 48 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI Detection and functional characterization of p180, a novel **cell cycle** **regulated** yeast transcription factor that binds **retinoblastoma** control elements.
- L8 ANSWER 49 OF 62 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 16
- TI A conserved family of WD-40 proteins binds to the **retinoblastoma** protein in both **plants** and **animals**.
- L8 ANSWER 50 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI Linking protein kinase C to **cell-cycle** control.
- => d 43 ab
- L8 ANSWER 43 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 12
AB It has previously been reported that complementary-sense gene products of wheat dwarf virus (WDV), a geminivirus of the genus Mastrevirus that infects monocotyledonous **plants**, bind to human and maize **retinoblastoma** (Rb) protein. Rb proteins control **cell-cycle** progression by sequestering transcription factors required for entry into S-phase, suggesting that the virus modifies the cellular environment to produce conditions suitable for viral DNA replication. Using a yeast two-hybrid assay, we have investigated whether the complementary-sense gene products of bean yellow dwarf virus, a mastrevirus that is adapted to dicotyledonous **plants**, also bind maize Rb protein. We demonstrate that whereas RepA binds to Rb protein, Rep does not, suggesting that RepA alone **regulates** host gene expression and progression of cells to S-phase. RepA mutants containing L to I, C to S, C to G, and E to Q mutations within the consensus Rb protein binding motif LXCE retained the ability to bind to

Rb, but with reduced efficiency. Most notably, the E to Q mutation reduced binding by approx. 95%. Nonetheless, all LXCXE mutants were able to replicate in tobacco protoplasts and to systemically infect Nicotiana benthamiana and bean, in which they produced wild-type symptoms. (c) 1999 Academic Press.

=> d 43 so

L8 ANSWER 43 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 12
SO Virology (1999), 256(2), 270-279
CODEN: VIRLAX; ISSN: 0042-6822

=> d 43 au

L8 ANSWER 43 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 12
AU Liu, Li; Saunders, Keith; Thomas, Carole L.; Davies, Jeffrey W.; Stanley, John

=> d 45 ab

L8 ANSWER 45 OF 62 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2004), on STN DUPLICATE 14

AB Recent discoveries of **plant retinoblastoma** (Rb) protein homologues and D-type cyclins suggest that control of the onset of cell division in plants may have stronger parallels with mammalian G1/S controls than with yeasts. In mammals, the Rb protein interacts specifically with D-type cyclins and regulates cell proliferation by binding and inhibiting E2F transcription factors. However, the developmental role of Rb in plants and its potential interaction with cell cycle regulators is unknown. We show that the maize Rb homologue ZmRb-1 is temporally and spatially regulated during maize leaf development. ZmRb-1 is highly expressed in differentiating cells, but almost undetectable in proliferating cells. In vitro, both ZmRb-1 and human Rb bind all classes of plant D-type cyclins with the involvement of a conserved N-terminal Leu-x-Cys-x-Glu (LxCxE) Rb-interaction motif. This binding is strongly reduced by mutation of the conserved Cys470 of ZmRb-1. ZmRb-1 binds human and Drosophila E2F, and inhibits transcriptional activation of human E2F. We also show that ZmRb-1 is a good in vitro substrate for all human G1/S protein kinases. The functional conservation of proteins that control the G1/S transition in mammals and plants points to the existence of plant E2F homologues. We conclude that evolution of Rb and cyclin D proteins occurred after separation of the fungi from the higher eukaryotic lineage, but preceded the divergence of plant and animal kingdoms.

=> d 45 so

L8 ANSWER 45 OF 62 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 14
SO Plant molecular biology, May 1998. Vol. 37, No. 1. p. 155-169
Publisher: Dordrecht : Kluwer Academic Publishers.
CODEN: PMBIDB; ISSN: 0167-4412

=> d 49 ab

L8 ANSWER 49 OF 62 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 16

AB In mammalian cells, the **retinoblastoma** (RB) protein **regulates G1** progression and functions through its association with various cellular proteins. Two closely related mammalian RB binding proteins, RbAp48 and RbAp46, share sequence homology with the Msil protein of yeast. Msil is a multicopy suppressor of a mutation in the IRA1 gene involved in the Ras-cAMP pathway that **regulates** cellular **growth**. Human RbAp48 is present in protein Complexes involved in histone acetylation and chromatin assembly. We report the cloning of cDNAs encoding four **plant** RbAp48-and Msil-like proteins: one from tomato, LeMSI1, and three from Arabidopsis. Complementation Studies confirm that LeMSI1 can function as a multicopy suppressor of the yeast iral mutant phenotype. The LeMSI1 protein localizes to the nucleus and binds to a 65-kD protein in wild-type as well as ripening inhibitor (rin) and Neverripe (Nr) tomato fruit. LeMSI1 also binds to the human RB protein and the RB-like RRB1 protein from maize, indicating that this interaction is conserved between **plants** and animals.

=> d 49 so

L8 ANSWER 49 OF 62 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 16

SO The Plant cell, Sept 1997. Vol. 9, No. 9. p. 1595-1606
Publisher: [Rockville, MD : American Society of Plant Physiologists, c1989-
CODEN: PLCEEW; ISSN: 1040-4651

=> d 51-62 ti

L8 ANSWER 51 OF 62 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 17

TI **Plant** cells contain a novel member of the **retinoblastoma** family of **growth regulatory** proteins.

L8 ANSWER 52 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI A new member of the hsp90 family of molecular chaperones interacts with the **retinoblastoma** protein during mitosis and after heat shock.

L8 ANSWER 53 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI Disruption of RB/E2F-1 interaction by single point mutations in E2F-1 enhances S-phase entry and apoptosis.

L8 ANSWER 54 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI Cyclin A-associated kinase activity is rate limiting for entrance into S phase and is negatively **regulated** in G-1 by p27-Kip1.

L8 ANSWER 55 OF 62 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.

- TI (2004) on STN DUPLICATE 18
Identification and analysis of a **retinoblastoma** binding motif in
the replication protein of a **plant** DNA virus: requirement for
efficient viral DNA replication.
- L8 ANSWER 56 OF 62 AGRICOLA Compiled and distributed by the National
Agricultural Library of the Department of Agriculture of the United States
of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 19
- TI The D-type alfalfa cyclin gene cycMs4 complements G1
cyclin-deficient yeast and is induced in the G1 phase of the
cell cycle.
- L8 ANSWER 57 OF 62 AGRICOLA Compiled and distributed by the National
Agricultural Library of the Department of Agriculture of the United States
of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 20
- TI A family of cyclin D homologs from **plants** differentially
controlled by **growth regulators** and containing the
conserved **retinoblastoma** protein interaction motif.
- L8 ANSWER 58 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
- TI Phosphorylation of E2F-1 modulates its interaction with the
retinoblastoma gene product and the adenoviral E4 19 kDa protein.
- L8 ANSWER 59 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
- TI G1 phase progression: Cycling on cue.
- L8 ANSWER 60 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Negative **regulation** of histone H1 kinase expression by mimosine,
a **plant** amino acid
- L8 ANSWER 61 OF 62 AGRICOLA Compiled and distributed by the National
Agricultural Library of the Department of Agriculture of the United States
of America. It contains copyrighted materials. All rights reserved.
(2004) on STN
- TI A genome-wide identification of E2F-**regulated** genes in
Arabidopsis.
- L8 ANSWER 62 OF 62 AGRICOLA Compiled and distributed by the National
Agricultural Library of the Department of Agriculture of the United States
of America. It contains copyrighted materials. All rights reserved.
(2004) on STN
- TI Differential stage-specific **regulation** of cyclin-dependent
kinases during cambial dormancy in hybrid aspen.
- => d 59 aB
- L8 ANSWER 59 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
- => d 59 so
- L8 ANSWER 59 OF 62 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
- SO Cell, (1994) Vol. 79, No. 4, pp. 551-555.
CODEN: CELLB5. ISSN: 0092-8674.
- => dis his

(FILE 'HOME' ENTERED AT 08:46:19 ON 21 SEP 2004)

FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 08:46:27 ON 21 SEP 2004

L1 15242 S RETINOBLASTOMA
L2 328 S L1 AND PLANT?
L3 220 S L2 AND (CELL CYCLE OR GROWTH OR DIVISION)
L4 156 S L3 AND REGULAT?
L5 74 S L4 AND S
L6 49 DUP REM L5 (25 DUPLICATES REMOVED)
L7 90 S L4 AND (G1 OR S)
L8 62 DUP REM L7 (28 DUPLICATES REMOVED)

=> d 14 and (virus or geminivirus)

'AND' IS NOT A VALID FORMAT

'(VIRUS' IS NOT A VALID FORMAT

'OR' IS NOT A VALID FORMAT

'GEMINIVIRUS)' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT) :ti

L4 ANSWER 1 OF 156 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2004) on STN

TI Plant retinoblastoma homologues control nuclear proliferation in the female gametophyte.

=> s 14 and (virus or geminivirus)

L9 43 L4 AND (VIRUS OR GEMINIVIRUS)

=> dup rem 19

PROCESSING COMPLETED FOR L9

L10 24 DUP REM L9 (19 DUPLICATES REMOVED)

=> d 1-10 ti

L10 ANSWER 1 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN

TI Boroproline compound combination therapy for various diseases

L10 ANSWER 2 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1

TI Interaction between a **geminivirus** replication protein and the plant sumoylation system

L10 ANSWER 3 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2

TI Phytocalpain controls the proliferation and differentiation fates of cells in plant organ development

L10 ANSWER 4 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3

TI Reprogramming plant gene expression: a prerequisite to **geminivirus** DNA replication

L10 ANSWER 5 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4

TI **Geminivirus** DNA replication and **cell cycle** interactions

L10 ANSWER 6 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN

TI Smac-peptides as therapeutics against cancer and autoimmune diseases by sensitizing for TRAIL- or anticancer drug-induced apoptosis

L10 ANSWER 7 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
TI Geminiviruses and host gene expression.

L10 ANSWER 8 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN
TI Retinoblastoma-binding protein

L10 ANSWER 9 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
TI Plant retinoblastoma-associated gene.

L10 ANSWER 10 OF 24 AGRICOLA Compiled and distributed by the National
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of America. It contains copyrighted materials. All rights reserved.
(2004) on STN

DUPLICATE 5

TI Stimulation of the cell cycle and maize transformation
by disruption of the plant retinoblastoma pathway.

=> d 4 ag

'AG' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid
in at least one of the files. Refer to file specific help messages
or the STNGUIDE file for information on formats available in
individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT) :ab

L10 ANSWER 4 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3

AB A review. Geminiviruses constitute a large family of plant
-infecting viruses with small, single-stranded DNA genomes that replicate
through double-stranded intermediates. Because of their limited coding
capacity, geminiviruses supply only the factors required to initiate their
replication and use plant nuclear DNA polymerases to amplify
their genomes. Many geminiviruses replicate in differentiated cells that
no longer contain detectable levels of host DNA polymerases and associated
factors. To overcome this barrier, geminiviruses induce the accumulation
of DNA replication machinery in mature plant cells by
reprogramming host gene expression. The mammalian DNA tumor viruses
activate host genes required for DNA replication by binding to the
retinoblastoma protein, a neg. regulator of cell
cycle progression, and relieving repression through the E2F family
of transcription factors. In this review, we discuss recent expts.
showing that geminiviruses also modulate components of the
retinoblastoma/E2F transcription regulatory network to
induce quiescent plant cells to re-enter the cell
cycle and regain the capacity to support high levels of DNA
replication. Regulation of the cell division cycle
and its integration with developmental pathways is complex, with many
factors, including hormones, sucrose and environmental signals,
controlling reentry into the plant cell cycle
. Geminivirus interactions with these regulatory
networks are likely to determine if and where they can replicate their genomes
in different plant tissues and hosts.

=> d 4 so

L10 ANSWER 4 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3
SO Molecular Plant Pathology (2004), 5(2), 149-156
CODEN: MPPAFD; ISSN: 1464-6722

=> d 5 ab

L10 ANSWER 5 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4
AB The Geminiviridae family includes a large number of viruses that infect plants and have a unique geminate virion particle, a single-stranded genome of .apprx.2.6-3.0 kb, and replicate through a rolling-circle mechanism. Since they encode for just a few proteins (4-6 depending on the members that belong to four different genera), a rich variety of interactions has evolved between viral proteins and host factors to develop the virus replicative cycle. Among them, we have been particularly interested so far: (i) in the interference with cell cycle regulatory proteins of the retinoblastoma-related (RBR)/E2F pathway and (ii) in the interaction with host DNA replication factors necessary for the assembly of a functional replication complex at the viral origin of DNA replication during the rolling-circle stage. Yeast two-hybrid assays revealed that wheat dwarf virus RepA protein, but not Rep protein, interacts with plant RBR protein. Interestingly, deletion of the C-terminal domain of Rep confers the truncated protein the ability to interact with RBR, suggesting that this domain may hinder the LXCXE RBR-binding motif. Secondary structure predictions support such a possibility.

=> d 10 ab

L10 ANSWER 10 OF 24 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 5

AB The genome of the Mastreviruses encodes a replication-associated protein (RepA) that interacts with members of the plant retinoblastoma-related protein family, which are putative cell cycle regulators. Expression of ZmRb1, a maize retinoblastoma-related gene, and RepA inhibited and stimulated, respectively, cell division in tobacco cell cultures. The effect of RepA was mitigated by over-expression of ZmRb1. RepA increased transformation frequency and callus growth rate of high type II maize germplasm. RepA-containing transgenic maize calli remained embryogenic, were readily regenerable, and produced fertile plants that transmitted transgene expression in a Mendelian fashion. In high type II, transformation frequency increased with the strength of the promoter driving RepA expression. When a construct in which RepA was expressed behind its native LIR promoter was used, primary transformation frequencies did not improve for two elite Pioneer maize inbreds. However, when LIR:RepA-containing transgenic embryos were used in subsequent rounds of transformation, frequencies were higher in the RepA+ embryos. These data demonstrate that RepA can stimulate cell division and callus growth in culture, and improve maize transformation.

=> d 10 so\
'SO\' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):so

L10 ANSWER 10 OF 24 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 5

SO Proceedings of the National Academy of Sciences of the United States of America, Sept 3, 2002. Vol. 99, No. 18. p. 11975-11980

Publisher: Washington, D.C. : National Academy of Sciences,
CODEN: PNASA6; ISSN: 0027-8424

=> d 11-20 ti

- L10 ANSWER 11 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 6
TI Dual Interaction of a **Geminivirus** Replication Accessory Factor
with a Viral Replication Protein and a **Plant Cell**
Cycle Regulator
- L10 ANSWER 12 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
TI Mutagenesis of the pRB pocket reveals that **cell cycle**
arrest functions are separable from binding to viral oncoproteins.
- L10 ANSWER 13 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 7
TI A **geminivirus** replication protein interacts with the
retinoblastoma protein through a novel domain to determine
symptoms and tissue specificity of infection in **plants**
- L10 ANSWER 14 OF 24 AGRICOLA Compiled and distributed by the National
Agricultural Library of the Department of Agriculture of the United States
of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 8
TI DNA replication and **cell cycle** in **plants**:
learning from geminiviruses.
- L10 ANSWER 15 OF 24 AGRICOLA Compiled and distributed by the National
Agricultural Library of the Department of Agriculture of the United States
of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 9
TI Geminiviruses and the **plant cell cycle**.
- L10 ANSWER 16 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 10
TI Bean Yellow Dwarf **Virus** RepA, but Not Rep, Binds to Maize
Retinoblastoma Protein, and the **Virus** Tolerates
Mutations in the Consensus Binding Motif
- L10 ANSWER 17 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN
TI Cloning of **plant retinoblastoma** protein cDNA and
method for controlling **plant cell** or **plant**
virus growth
- L10 ANSWER 18 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 11
TI RRB1 and RRB2 encode maize **retinoblastoma**-related proteins that
interact with a **plant** D-type cyclin and **geminivirus**
replication protein
- L10 ANSWER 19 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN
TI Multiple component RNA catalysts and their use in targeted cleavage of
mRNA
- L10 ANSWER 20 OF 24 AGRICOLA Compiled and distributed by the National
Agricultural Library of the Department of Agriculture of the United States
of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 12
TI **Plant** cells contain a novel member of the **retinoblastoma**
family of growth regulatory proteins.

=> d 11 ab

- L10 ANSWER 11 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 6

AB Geminiviruses replicate their small, single-stranded DNA genomes through double-stranded DNA intermediates in **plant** nuclei using host replication machinery. Like most dicot-infecting geminiviruses, tomato golden mosaic **virus** encodes a protein, AL3 or C3, that greatly enhances viral DNA accumulation through an unknown mechanism. Earlier studies showed that AL3 forms oligomers and interacts with the viral replication initiator AL1. Expts. reported here established that AL3 also interacts with a **plant** homolog of the mammalian tumor suppressor protein, **retinoblastoma** (pRb). Anal. of truncated AL3 proteins indicated that pRb and AL1 bind to similar regions of AL3, whereas AL3 oligomerization is dependent on a different region of the protein. Anal. of truncated AL1 proteins located the AL3-binding domain between AL1 amino acids 101 and 180 to a region that also includes the AL1 oligomerization domain and the catalytic site for initiation of viral DNA replication. Interestingly, the AL3-binding domain was fully contiguous with the domain that mediates AL1/pRb interactions. The potential significance of AL3/pRb binding and the coincidence of the domains responsible for AL3, AL1, and pRb interactions are discussed. (c) 2001 Academic Press.

=> d 11 so

L10 ANSWER 11 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 6
SO Virology (2001), 279(2), 570-576
CODEN: VIRLAX; ISSN: 0042-6822

=> d 13 ab

L10 ANSWER 13 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 7
AB Geminiviruses replicate in nuclei of mature **plant** cells after inducing the accumulation of host DNA replication machinery. Earlier studies showed that the viral replication factor, AL1, is sufficient for host induction and interacts with the **cell cycle regulator**, **retinoblastoma** (pRb). Unlike other DNA **virus** proteins, AL1 does not contain the pRb binding consensus, LXCXE, and interacts with **plant** pRb homologues (pRBR) through a novel amino acid sequence. The pRBR binding domain of AL1 was mapped between amino acids 101 and 180 and two mutants were identified that are differentially impacted for AL1-pRBR interactions. **Plants** infected with the E-N140 mutant, which is wild-type for pRBR binding, developed wild-type symptoms and accumulated viral DNA and AL1 protein in epidermal, mesophyll and vascular cells of mature leaves. **Plants** inoculated with the KEE146 mutant, which retains 16% pRBR binding activity, only developed chlorosis along the veins, and viral DNA, AL1 protein and the host DNA synthesis factor, proliferating cell nuclear antigen, were localized to vascular tissue. These results established the importance of AL1-pRBR interactions during **geminivirus** infection of **plants**.

=> d 13 so

L10 ANSWER 13 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 7
SO EMBO Journal (2000), 19(13), 3485-3495
CODEN: EMJODG; ISSN: 0261-4189

=> d 17 ab

L10 ANSWER 17 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN
AB The invention relates to the isolation and characterization of a maize cDNA sequence which codes for a **retinoblastoma** (Rb) protein. This finding is based on the structural and functional properties of the

Rb protein of plants as a possible regulator of the cell cycle, the cell growth and the cell differentiation in plants. The use of the retinoblastoma protein or the DNA sequence which codes it in the control of the growth of plant cells, plants and/or plant viruses is claimed. A yeast two-hybrid system indicated that the plant Rb protein interacted with the LXCXE motif of wheat dwarf virus RepA protein.

=> d 17 pi

L10	ANSWER 17 OF 24	CAPLUS	COPYRIGHT 2004 ACS on STN	
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9747647	A1	19971218	WO 1996-ES130	19960613
W: CA, JP, US				
CA 2257972	AA	19971218	CA 1996-2257972	19960613
CA 2257828	AA	19971218	CA 1997-2257828	19970612
WO 9747745	A1	19971218	WO 1997-EP3070	19970612
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9732579	A1	19980107	AU 1997-32579	19970612
AU 721332	B2	20000629		
ZA 9705202	A	19981214	ZA 1997-5202	19970612
EP 914436	A1	19990512	EP 1997-928187	19970612
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CN 1227605	A	19990901	CN 1997-197141	19970612
BR 9710848	A	20000111	BR 1997-10848	19970612
NZ 333100	A	20000526	NZ 1997-333100	19970612
JP 2001502522	T2	20010227	JP 1998-501212	19970612
MX 9810582	A	20000131	MX 1998-10582	19981211
US 6384299	B1	20020507	US 1998-213293	19981214
US 2002046416	A1	20020418	US 2001-770657	20010129
US 2002133847	A1	20020919	US 2001-25676	20011226

=> dis his

(FILE 'HOME' ENTERED AT 08:46:19 ON 21 SEP 2004)

FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 08:46:27 ON 21 SEP 2004

L1	15242 S RETINOBLASTOMA
L2	328 S L1 AND PLANT?
L3	220 S L2 AND (CELL CYCLE OR GROWTH OR DIVISION)
L4	156 S L3 AND REGULAT?
L5	74 S L4 AND S
L6	49 DUP REM L5 (25 DUPLICATES REMOVED)
L7	90 S L4 AND (G1 OR S)
L8	62 DUP REM L7 (28 DUPLICATES REMOVED)
L9	43 S L4 AND (VIRUS OR GEMINIVIRUS)
L10	24 DUP REM L9 (19 DUPLICATES REMOVED)

=> s l2 and transgenic

L11 20 L2 AND TRANSGENIC

=> dup rem l11

PROCESSING COMPLETED FOR L11

L12 14 DUP REM L11 (6 DUPLICATES REMOVED)

=> d 1-14 ti

L12 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

TI Production of recombinant antibodies comprising one common light chain and three different heavy chains for diagnosis and therapy

L12 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1

TI Interaction between a geminivirus replication protein and the plant sumoylation system

L12 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

TI Transgenic plant growth modulation using a gene encoding a protein of the Elongator complex, such as DRL1 from *Arabidopsis thaliana*

L12 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

TI Anti-HLA-DR antibodies for diagnosis, prevention and treatment of cancers, autoimmune diseases and allergies

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TI A maize histone deacetylase and **retinoblastoma**-related protein physically interact and cooperate in repressing gene transcription.

L12 ANSWER 6 OF 14 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 2

TI Stimulation of the cell cycle and maize transformation by disruption of the plant **retinoblastoma** pathway.

L12 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3

TI Phosphorylation of **retinoblastoma**-related protein by the cyclin D/cyclin-dependent kinase complex is activated at the G1/S-phase transition in tobacco

L12 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

TI Protein and cDNA sequences of maize **retinoblastoma**-associated-like proteins (MSI-like) and uses thereof in enhancing plant disease resistance

L12 ANSWER 9 OF 14 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 4

TI Expression and stability of *Arabidopsis* CDC6 are associated with endoreplication.

L12 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

TI Compositions affecting programmed cell death and their use in the modification of forestry plant development

L12 ANSWER 11 OF 14 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI Fumonisin B1, a mycotoxin contaminant of cereal grains, and inducer of apoptosis via the tumour necrosis factor pathway and caspase activation.

L12 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

TI Cloning and cDNA sequences of wheat GRAB proteins that bind to geminivirus

RepA replication protein

L12 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN
TI Multiple component RNA catalysts and their use in targeted cleavage of mRNA

L12 ANSWER 14 OF 14 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
TI A genome-wide identification of E2F-regulated genes in Arabidopsis.

=> d 7 ab

L12 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3
AB In mammals, D-type cyclin-associated kinases mainly regulate the G1/S transition by phosphorylating the *retinoblastoma* (Rb) protein. We previously demonstrated that in tobacco, cyclin D (Nicta; CycD3;3) is complexed with the PSTAIRE-containing cyclin-dependent kinase (CDKA) from tobacco. Here, we show that Nicta; CycD3;3-associated kinases phosphorylate both the tobacco Rb-related protein (NtRb1) and histone H1. Although NtRb1 kinase activity was detected only during the middle G1- to early S-phase, histone H1 kinase activity was observed as two peaks in G1- to S-phase and G2/M- to M-phase. Importantly, we show that the proportion of cells in the G1-phase was reduced in *transgenic* Bright Yellow-2 cells overexpressing Nicta; CycD3;3-GFP. Mutational analyses revealed that phosphorylation of Thr-191 in Nicta; CycD3;3 possibly is required for both full kinase activity and localization predominantly to the nucleus. These data suggest that Nicta; CycD3;3 acts as a rate-limiting regulator in the G1/S transition by forming active complexes with CDKA or its related kinases to phosphorylate Rb-related protein and potentially plays a novel role during G2/M and mitosis.

=> d 7 so

L12 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3
SO Plant Cell (2002), 14(8), 1847-1857
CODEN: PLCEEW; ISSN: 1040-4651

=> d 8 pi

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001004285	A2	20010118	WO 2000-US40371	20000713
	WO 2001004285	A3	20010726		
	WO 2001004285	C2	20020808		
	WO 2001004285	C1	20031023		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			

=> d 12 pi

L12	ANSWER 12 OF 14	CAPLUS	COPYRIGHT 2004 ACS on STN		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9856811	A2	19981217	WO 1998-EP3662	19980609
	WO 9856811	A3	19990304		
	WO 9856811	B1	19990408		
		W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM		
		RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG		
	ES 2132025	A1	19990801	ES 1997-1292	19970612
	ES 2132025	B1	20001201		
	AU 9882160	A1	19981230	AU 1998-82160	19980609
	AU 753798	B2	20021031		
	EP 989997	A2	20000405	EP 1998-932162	19980609
		R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI		
	BR 9809447	A	20000620	BR 1998-9447	19980609
	NZ 500529	A	20011026	NZ 1998-500529	19980609
	JP 2002506345	T2	20020226	JP 1999-501645	19980609
	ZA 9805135	A	19991213	ZA 1998-5135	19980612
	MX 9911519	A	20000630	MX 1999-11519	19991210

=> s ((gutierrez-armenta c?) or (gutierrez-armenta, c?))/au
 L13 4 ((GUTIERREZ-ARMENTA C?) OR (GUTIERREZ-ARMENTA, C?))/AU

=> dup rem l13
 PROCESSING COMPLETED FOR L13
 L14 4 DUP REM L13 (0 DUPLICATES REMOVED)

=> d 1-4 ti

L14 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
 TI A wheat homolog of the E2F dimerization partner and a cDNA encoding it and
 the control of the plant cell cycle

L14 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Transgenic plant cells expressing a recombinant plant E2F peptide

L14 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Cloning and cDNA sequences of wheat GRAB proteins that bind to geminivirus
 RepA replication protein

L14 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Cloning of plant retinoblastoma protein cDNA and method for controlling
 plant cell or plant virus growth

=> d 3 so

L14 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
 SO PCT Int. Appl., 58 pp.
 CODEN: PIXXD2

=> d 3 pi

L14 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9856811	A2	19981217	WO 1998-EP3662	19980609
WO 9856811	A3	19990304		
WO 9856811	B1	19990408		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
ES 2132025	A1	19990801	ES 1997-1292	19970612
ES 2132025	B1	20001201		
AU 9882160	A1	19981230	AU 1998-82160	19980609
AU 753798	B2	20021031		
EP 989997	A2	20000405	EP 1998-932162	19980609
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
BR 9809447	A	20000620	BR 1998-9447	19980609
NZ 500529	A	20011026	NZ 1998-500529	19980609
JP 2002506345	T2	20020226	JP 1999-501645	19980609
ZA 9805135	A	19991213	ZA 1998-5135	19980612
MX 9911519	A	20000630	MX 1999-11519	19991210

=> d 4 pi

L14 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9747647	A1	19971218	WO 1996-ES130		19960613
W: CA, JP, US					
CA 2257972	AA	19971218	CA 1996-2257972		19960613
CA 2257828	AA	19971218	CA 1997-2257828		19970612
WO 9747745	A1	19971218	WO 1997-EP3070		19970612
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG					
AU 9732579	A1	19980107	AU 1997-32579		19970612
AU 721332	B2	20000629			
ZA 9705202	A	19981214	ZA 1997-5202		19970612
EP 914436	A1	19990512	EP 1997-928187		19970612
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
CN 1227605	A	19990901	CN 1997-197141		19970612
BR 9710848	A	20000111	BR 1997-10848		19970612
NZ 333100	A	20000526	NZ 1997-333100		19970612
JP 2001502522	T2	20010227	JP 1998-501212		19970612
MX 9810582	A	20000131	MX 1998-10582		19981211
US 6384299	B1	20020507	US 1998-213293		19981214
US 2002046416	A1	20020418	US 2001-770657		20010129
US 2002133847	A1	20020919	US 2001-25676		20011226

=> s ((sanz-burgos, s?) or (sanz-burgos s?))/au

L15 0 ((SANZ-BURGOS, S?) OR (SANZ-BURGOS S?))/AU

=> s ((pelayo sanz-burgos, s?) or (pelayo sanz-burgos s?))/au
L16 0 ((PELAYO SANZ-BURGOS, S?) OR (PELAYO SANZ-BURGOS S?))/AU

=> s ((xie q?) or (xie, q?))/au
L17 1650 ((XIE Q?) OR (XIE, Q?))/AU

=> s l17 and retinoblastoma
L18 13 L17 AND RETINOBLASTOMA

=> dup rem l18
PROCESSING COMPLETED FOR L18
L19 6 DUP REM L18 (7 DUPLICATES REMOVED)

=> d 1-6 ti

L19 ANSWER 1 OF 6 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI Plant **retinoblastoma**-associated gene.

L19 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
TI The cloning of plant E2F, a **retinoblastoma**-binding protein,
reveals unique and conserved features with animal G1/S regulators

L19 ANSWER 3 OF 6 AGRICOLA Compiled and distributed by the National
Agricultural Library of the Department of Agriculture of the United States
of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 2
TI The maize **retinoblastoma** protein homologue ZmRb-1 is regulated
during leaf development and displays conserved interactions with G1/S
regulators and plant cyclin D (CycD) proteins.

L19 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
TI Cloning of plant **retinoblastoma** protein cDNA and method for
controlling plant cell or plant virus growth

L19 ANSWER 5 OF 6 AGRICOLA Compiled and distributed by the National
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of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 3
TI Plant cells contain a novel member of the **retinoblastoma** family
of growth regulatory proteins.

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of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 4
TI Identification and analysis of a **retinoblastoma** binding motif in
the replication protein of a plant DNA virus: requirement for efficient
viral DNA replication.

=> d so

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SO Official Gazette of the United States Patent and Trademark Office Patents,
(May 7, 2002) Vol. 1258, No. 1. <http://www.uspto.gov/web/menu/patdata.html>
. e-file.
CODEN: OGUPE7. ISSN: 0098-1133.

=> d pi

L19 ANSWER 1 OF 6 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
PI US 6384299 May 07, 2002

=> d 7 pi

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- L19 ANSWER 6 OF 6 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 4
- TI Identification and analysis of a **retinoblastoma** binding motif in the replication protein of a plant DNA virus: requirement for efficient viral DNA replication.

=> d 6 ab

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(2004) on STN DUPLICATE 4

AB Geminiviruses are plant DNA viruses with small genomes whose replication, except for the viral replication protein (Rep), depends on host proteins and, in this respect, are analogous to animal DNA tumor viruses, e.g. SV40. The mechanism by which these animal viruses create a cellular environment permissive for viral DNA replication involves the binding of a virally encoded oncprotein, through its LXCXE motif, to the **retinoblastoma** protein (Rb). We have identified such a LXCXE motif in the Rep protein of wheat dwarf geminivirus (WDV) and we show its functional importance during viral DNA replication. Using a yeast two-hybrid system we have demonstrated that WDV Rep forms stable complexes with p130Rbr2, a member of the Rb family of proteins, and single amino acid changes within the LXCXE motif abolish the ability of WDV Rep to bind to p130Rbr2. The LXCXE motif is conserved in other members of the same geminivirus subgroup. The presence of an intact Rb binding motif is required for efficient WDV DNA replication in cultured wheat cells, strongly suggesting that one of the functions of WDV Rep may be the linking between viral and cellular DNA replication cycles. Our results point to the existence of a Rb-like protein(s) in plant cells playing regulatory roles during the cell cycle.

=> d 6 so

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(2004) on STN DUPLICATE 4

SO The EMBO journal, Aug 15, 1995. Vol. 14, No. 16. p. 4073-4082
Publisher: Oxford, U.K. : Oxford University Press.
CODEN: EMJODG; ISSN: 0261-4189

=> s ((lopez p?) or (lopez, p?))/au
L20 2686 ((LOPEZ P?) OR (LOPEZ, P?))/AU

=> s 120 and retinoblastoma
L21 1 L20 AND RETINOBLASTOMA

=> d ti

L21 ANSWER 1 OF 1 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI Plant **retinoblastoma**-associated gene.

=> d ti

L21 ANSWER 1 OF 1 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI Plant **retinoblastoma**-associated gene.

=> d au

L21 ANSWER 1 OF 1 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
AU Gutierrez-Armenta, Cristiano [Inventor, Reprint author]; Sanz-Burgos,
Andres Pelayo [Inventor]; Xie, Qi [Inventor]; Lopez, Paula Suarez
[Inventor]

=> d so

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SO Official Gazette of the United States Patent and Trademark Office Patents,
(May 7, 2002) Vol. 1258, No. 1. <http://www.uspto.gov/web/menu/patdata.html>
. e-file.
CODEN: OGUP7. ISSN: 0098-1133.

=> d pi

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PI US 6384299 May 07, 2002